

gully on a sloping plain. It perched conspicuously on bush tops fluttering periodically to the ground nearby to pick up food. It was tame and allowed continuous and close observation and appeared to be in quite bright fresh plumage though it is not possible to state whether it was a male or female. Looking at the coloured plate by Paul Barruel, of this species in "Les Oiseaux du Proche et du Monjen Orient", this Baluchistan specimen had more conspicuous black or dark brown streaking both on its crown and mantle whilst its throat was a yellow-buff or fulvous tone and the outer margins of the scapulars were pale creamy-buff. The broad supercilium was much whiter than that of either *P. strophitata* or *P. atrogularis* which have creamy-yellow superciliums. These latter species, with a more marked altitudinal migration pattern are more frequently encountered in Pakistan.

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10. A NOTE ON THE BIRD PREDATORS OF THE DEATH'S HEAD HAWKMOTH, *ACHERONTIA STYX* W.

The sphingid *Acherontia styx* W. is a polyphagous pest noted on sesamum, lab lab, brinjal, groundnut and jasmine. The caterpillar is a defoliator. Sesamum is badly effected especially during the months of September - November at Coimbatore with as much as 20% damage. However, the outbreak is often effectively checked by birds that feed on these fleshy caterpillars. The following are the birds that have been

observed preying on the caterpillars of *Acherontia styx* W. in sesamum fields.

Corvus splendens Vieillot, Common House Crow

This is the most effective predator and observed in the field throughout the day. The birds usually fly around the fields to locate the caterpillars and perch on any available support or walk around the bunds to pick the caterpillars. They pick up the half to full grown caterpillars while earlier instars usually escape. The birds identify the prey by the light movement of the caterpillars and the swinging of the twigs caused by the weight of the fleshy larvae. The predation can be effectively increased by providing bamboo stakes in the fields at random locations. It is interesting to note that these birds pick only the caterpillars of *A. styx* even though the caterpillars are often found with *Estigmene lactinea* and *Euproctis faterna* larvae and certain lygaeid bugs.

C. macrorhynchos Wagler, Jungle Crow

This bird is also an effective predator. However, they come in less numbers than *C. splendens*, and are seen more in the morning hours.

Turdoides caudatus (Damont) Common Babbler

These birds fed on earlier instars of this sphingid. The birds fly over and go deep into the field between the plants to pick the prey. The common babblers' nest was also been met with in the field.

Acridotheres tristis Linn., Common Myna

The common myna picks up the small earlier instars on the ground in the field. Their activity was more during the earlier hours of the morning, but visited the field throughout the day in small flocks of three to five. Their food, included grasshoppers and crickets.

Dicrurus adsimilis (Bechstein), Black Drongo or King Crow

These birds were also frequently noted every day. Two or three were seen perched on electric or telegraph lines over the field. They just plunged into the field and took away large sized sphingids. Besides the sphinx, this bird preys upon various other caterpillars and lygaeid bugs too. Other insectivorous birds included the green bee-eater, *Merops orientalis* Latham., the night-jar, *Caprimulgus asiaticus* Latham and the common palm swift, *Cypsiurus parvus* (Lichtenstein).

All these birds are very common (Fletcher and Inglis 1924; Salim Ali 1967) and are a good check to pests like *A. styx*.

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11. A NOTE ON *TESTUDO HORSFIELDI* GRAY, THE AFGHAN TORTOISE OR HORSFIELD'S FOUR-TOED TORTOISE

Five hatchlings of this species were picked up in the summer of 1967 in Baluchistan. I have kept them on the earth floor of a rather spacious aviary in the Punjab, since that date.

Some of my observations on their behaviour do not appear to have been recorded hitherto.

Description

It is a relatively robust and purely terrestrial tortoise, distinguished from other species of the genus by having only four instead of five claws on the fore feet.

The tail in male specimens appears slightly longer than those of the females, and also the concavity in the posterior region of the plastron is more marked and clearer than is the case with females. However, I have not recorded sufficient measurements to substantiate this impression. In both sexes the tail terminates in a horny nail, which is again, slightly longer in that of the males.

The carapace is markedly flared along its posterior edges, so that its width at the broadest point, just anterior to the hind legs, is roughly ninety percent of its length. Minton (1966) records carapace length in adults from 170 mm to 208 mm. In March 1974 I came across two particularly massive specimens in the Sorkhab valley of Pishin District, Baluchistan. One, which appeared to be a female measured approximately 220 mm carapace length and the other was approximately 210 mm.

Distribution

Murray (1884) recorded them as occurring in the Lakhi Hills of Sind but there is no recent evidence of its occurrence east of Baluchistan. It is still fairly plentiful in that Province, at elevations between 5000 up to 7000 feet. I have found it as low as 3000 feet in the Chagai District, near Anam Bostan. It extends northwards into southern Waziristan, specimens having been collected from Wano (Smith 1931). Elsewhere it occurs in Afghanistan, Kazakhstan in the USSR, and in northern Iran, westwards to the shores of the Caspian (Minton, op. cit).

Growth Rate

Minton (op. cit) records a hatchling given to him in August, having a carapace length of 51 mm. Three years later it had grown to